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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/719,455

11/21/2003

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555255012644

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10/01/2004

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EXAMINER

HYEON, HAE M

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/719,455

**Applicant(s)**

KYOWSKI ET AL.

**Examiner**

Hae M Hyeon

**Art Unit**

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-19 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION*****Drawings***

1. The drawings are objected to because in Figure 3, the reference number 58 is pointing at the edge of the locking tab 54 instead of the leading edge of the wing 52. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Claim Objections***

3. Claim 4 is objected to because of the following informalities: Claim 4, line 1, it seems that “includes” should be -- include --.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 5-11, 14, 15, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hughes et al (6,077,130).

Hughes discloses an apparatus 2 comprising a housing 4 having a plurality of electrical conduits 6, a battery 16, a first circuit board 18 and a second circuit board 20. Each conduit 6 has a base 28, a battery contact 50, a first circuit board contact 36, and a second circuit board contact 62. Each conduit 6 is formed by a single piece of material. The battery contact 50 is located on a battery contacting arm 48; the first circuit board contact 36 is located on a first circuit board contacting arm; and the second circuit board contact 62 is located on a second circuit board contacting arm 60. The battery contacting arm 48, the first circuit board contacting arm and the second circuit board contacting arm 60 are extending from the base 28. A spring 56 and a spring 66 are integrally formed in the battery contacting arm 48 and the second circuit board contacting arm 60, respectively. The battery contacting arm 48 and spring 56 are movable

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between a pre-engaged position when the battery contacting arm 48 is not in contact with the battery 16 and an engaged position when the battery contacting arm 48 is in contact with the battery 16. The housing 4 physically separates and electrically isolates the electrical conduits 6 from each other. Although Hughes does not describes center-to-center pitch of the battery contacting arms and the battery contacts, Figures 1-2 and 4-5 show the electrical conduits 6 arranged in a row to have center-to-center pitch.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 4, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al in view of Schnell et al (6,231,394 B1).

Claims 3 and 4 recite that the contacts include a boss. Claim 17 recites the battery contacting arm having a hook at an end and the housing having a hook retaining piece.

While Hughes does not disclose a hook of the battery contacting arm and a hook retaining piece of the housing, Schnell discloses an electrical connector 10 comprising a contact 16 having a hook 16.1 at an end and a boss 16.2 and a housing 12 having a hook retaining piece 32.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the apparatus taught by Hughes such that it would have the

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battery contacting arm with a hook at an end and a boss and the housing with a hook retaining piece as taught by Schnell because the boss provides a good electrical contact and the hook securely holds the battery contacting arm within the housing.

8. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al.

While claim 13 recites the first circuit board contacting arm being integrally formed with a spring and claim 16 recites the first center-to-center pitch being larger than the second center-to-center pitch, Hughes does not disclose the limitations of claim 13 and 16. However, Hughes already teaches the battery contacting arm and the second circuit board contacting arm having an integrally formed spring. Also, it is common knowledge to use a spring contact to provide easy connection and disconnection between two objects. Furthermore, replacing the soldering first circuit board contacting arm with the first circuit board contacting arm with an integrally formed spring only deals with a duplication of part. It has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Also, the first pitch being larger than the second pitch only deals with changing the size of the pitches. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the electrical conduit taught by Hughes such that it would have an integrally formed spring with a contacting arm and different size pitches between battery contacts and the electrical conduit as taught by the instant invention because the spring contact

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provides easy connection and disconnection. The different size pitches between the battery contacts and the electrical conduit only deals with changing size of the pitches.

*Allowable Subject Matter*

9. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 5,026,290 by Dery, US Patent No. 5,551,883 by Davis, US Patent No. 5,885,090 by Comstock et al., US Patent No. 6,302,727 B1 by Fedorjaka, and US Patent No. 6,361,359 B1 by Du et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M Hyeon whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C Patel can be reached on (571) 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hae M Hyeon  
Primary Examiner  
Art Unit 2839

hmh

*hmh*

*Hae Moon Hyeon*